**Off-Site Construction Inspection**

# Circular A-1

Reference: California Building Code, Part 1, Section 4-330 through 4-339 Issued 08-13-2003

This circular is intended for use by the Division of the State Architect (DSA) plan review engineers and field engineers to indicate an acceptable method for achieving compliance with applicable codes. Its purpose is to promote uniform statewide criteria for use in plan review and construction review of public elementary and secondary schools, community colleges and state-owned or state-leased essential services buildings. Other methods proposed by design professionals to solve a particular problem may be considered by DSA and reviewed for code compliance.

**Purpose:** The purpose of this circular is to clarify the requirements for testing of materials and inspection of the construction that takes place off-site. Examples of construction that may take place off-site include, but are not limited to: modular buildings, bleachers, light poles, elevators and structural elements of buildings.

**1. General.** The requirements for testing of materials and inspection are the same independent of the location where the construction takes place. Many building components are not constructed at the site where they will be used. Supervision is provided by DSA for proper enforcement of the Field Act during the construction of a building, structure or element of a structure.

**2. Background.**

**2.1** DSA has a program for the testing and inspection of factory-built buildings constructed at a location remote from the project site. DSA offers a (factory built) Relocatable Building In-Plant (RBIP) inspector examination to qualify individuals to perform this type of multi-disciplinary inspection. Details and an application for the RBIP examination are available from the DSA Headquarters Office.

**2.2** The fabrication of bleachers is addressed in DSA's Interpretations of Regulations Manual, see IR M-8. The Interpretations of Regulations Manual may be downloaded at: http://www.dsa.dgs.ca.gov, click on "Publications."

**3. General Application.**

**3.1** In general all aspects of construction shown on DSA approved documents require continuous, personal inspection by an inspector approved by DSA. Packaged equipment such as HVAC units, motors, transformers, etc need not be inspected during fabrication. Structural components such as poles for lights, platforms for HVAC units, wood and/or steel open-web joists, etc. require inspection.

**3.2** Material testing requirements will be listed on the Test and Inspection List and in the plans and/or specifications for each project. Materials must be sampled, handled, transported, and tested by a testing facility accepted in DSA's Laboratory Evaluation and Acceptance (LEA) program. When approved by the DSA field engineer, an LEA accepted laboratory may subcontract testing of materials to a facility that is not LEA accepted when all of the conditions of paragraph 3.2.1 are met.

**3.2.1** a) an LEA accepted facility does not exist within 300 miles of both the material supplier location and the material fabrication location(s),

b) the material tests to be performed are routine and the materials to be tested are used in an ordinary manner. Unusual materials and/or applications may require testing by an LEA accepted facility at the discretion of the DSA field engineer for the project, and

c) the facility to which services are contracted operates under the supervision of the engineer in charge of the LEA accepted facility performing on-site sampling and testing for the project. The engineer must evaluate the subcontract facilities management, personnel, equipment, operations practices, etc. The engineer shall make sure that all personnel involved in the sampling, handling, and testing of material are fully aware of all codes, and standards (including special Title 24 code requirements) for the sampling, testing, and reporting of materials tests required for the project. The engineer shall verify that the subcontract facility has been evaluated by recognized agencies as required by the applicable ASTM standards (including ASTM E329, ASTM C1077, etc) for the specific tests that are required for the project. The engineer shall verify that the subcontract facility participates in proficiency sampling programs as required by the applicable ASTM standards (including ASTM E329, ASTM C1077, etc) for the specific tests that are required for the project. The engineer must include all tests performed by the subcontract laboratory on his laboratory final verified report.

**3.3** Special inspection requirements for certain aspects of the construction will be identified on the Tests and Inspections List and the DSA approved plans and/or specifications. Construction processes such as welding, precast concrete, fabrication of glued-laminated lumber, etc. must be inspected by an appropriately qualified special inspector.

All aspects of construction require personal continuous inspection by an inspector approved by DSA. Special inspectors may also be approved on a case-by-case basis by the DSA field engineer for inspection of general aspects of construction such as installation of wood or metal studs, gypsum wall-board, electrical, mechanical, etc. Alternatively, an “in-plant” project inspector may be approved to perform in-plant fabrication inspection of a variety of trades.

**3.4** “In-plant” inspectors are considered to be project inspectors responsible for all aspects of inspection of construction that occurs in the fabrication plant. Inspection, reporting, employment, and all other aspects of inspection are identical to those defined for project inspectors except that the scope of work for which the “in-plant” inspector is responsible will not be the entire scope of the project. The portions of the construction that will occur in the fabrication plant and the portions that will occur at the project site must be clearly defined as part of the DSA approved documents or on the Forms DSA-5 for the “in-plant” inspector as well as the project inspector. In-plant inspectors are required to be certified as class 1 inspectors or as RBIP inspectors (see paragraph 2.1) by DSA.